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ABSTRACT

This study examined the effectiveness of a cooperative learning model for the teaching of Freshman English at the college level. The model involved student presentations based on assigned readings from the texts, nine compositions and daily quizzes on the reading material, and peer grading of the daily quizzes as well as mid-term and final exams, which included spot checking by the instructor for accuracy of grading. Weekly attitudinal surveys revealed a postive perception of students on the whole toward the conduct of the class. Results further indicated that the disciplined structure of the model produced in the students better mastery of the subject matter and led to better classroom attendance. (Nine tables of data are included; 32 references and one appendix containing the attitudinal survey are attached.) (KEH)

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Teacher-Student Cooperative Learning in the Freshman Writing Course

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Abstract

On the basis of a model established for the teaching of Freshman English in 1979, a cooperative learning model was used for the teaching of Freshman English again in 1989. This model involved 1. Student presentations based on the explanation of material from assigned readings in the text(s). 2. Daily quizzes of the material from the assigned reading. 3. Peer grading of the daily quizzes and exams with the instructor spot checking for accuracy of grading. Attitudinal surveys revealed a positive perception of students on the whole toward the conduct of the class. Perhaps an even greater positive aspect of the cooperative learning model used here is the discipline that it introduced into the educational process resulting in a more adequate mastery of the subject matter and manifesting itself in better classroom attendance. Future classes and attempts to sample other aspects of the educational process involved in cooperative learning will, no doubt, throw more light on the nature of student-teacher interaction and the reasons for the findings in this study.

Background

This model for cooperative learning in a freshman English class began its development in 1979 to alleviate the problems of grading compositions in freshman composition during a five week summer school. Such a course required the grading of 50 or more themes per week. As a result, peer grading and a system requiring the students to run the class were utilized. The system used for such a class continued its development over the years in classes focusing on teaching methods, research methods and statistics, and others in which the acquisition of knowledge was and still is the primary goal. The teaching of freshman English, however, centers on the development of a skill and it is in skill development classes that cooperative (or collaborative) learning has been used so effectively.

Review of Literature

D. J. Magin (1982) trained a group of university students in decision making using cooperative (collaborative) learning. Hester (1984) used collaborative learning to teach English as a second language, again focusing on the acquisition of a skill as did Bassano and Christison (1988) and Bejerano (1987). Collaborative learning or peer teaching is used in language acquisition in a bilingual class by Chesterfield and Chesterfield

(1985), Heller and Barker (1988), and by Perez (1979), in the acquisition of language communication skills by Celani (1979), in the acquisition of dialogue skills in the foreign language class (Manthey 1987), in teaching survival skills to retarded children (Snell 1979) and in imparting teaching skills to English as a second language teachers (Plaister 1977). Similarly, peer teaching has been used in the teaching of reading skills (Larson and others 1984, Mocker 1975) and in the impartation of orthographic skills (Lambiotte and others 1988). Cooperative learning has even been used for building a positive attitude in the foreign language classroom (Gunderson and Johnson 1980) as well as in developing foreign language skills with college students (Ulrich 1982) and with children (Cooper and others 1982). Peer teaching or collaborative learning has been used to enhance the student's capacity for self-direction and intellectual responsibility (Welds 1986). The same kind of teaching / learning has been used to develop courtroom skills of expert witnesses and lawyers (McCreary 1977).

As the above survey would indicate, peer teaching and collaborative (or cooperative) learning occur most frequently in skill-based classes. They do not occur so frequently in classes dealing with the impartation (or acquisition) of knowledge. In fact, one report dealing with conveying knowledge from teacher to student does so under the title of 'lecture' with a subheading for collaborative learning (Oddi 1983). They do occur, however,

in the area of knowledge acquisition under the general heading of peer tutoring. As such, one of the proponents boasts that peer tutoring is used in "... increasingly esoteric subject areas" (Topping, 1988:5) and starts the list with foreign language teaching and follows it with writing and reading (1988:19). Besides this, Wagner (1982:231) reports on a project in which "... arithmetic skills ..." were effectively conveyed through peer teaching.

The Setting

Thus in the summer of 1989, a freshman English class once again was conducted on the basis of the model of the experiment with the 1979 freshman class with more accurate means of assessing the value of the class.

The Collaborative Class

For this reason, on the first day of class students were given the following instructions with the outline of the course.

June 5, 1989 ENG 101: Freshman Composition JWNey

Requirements of the course: (1) Complete two compositions per week for a total of at least nine papers, (2) write mid-term and final exam, (3) write essay answers to quizzes on reading on days

when themes are not due, (4) do peer grading of the compositions, quizzes and exams of classmates, (5) give five minute presentations on various aspects of the writing process and on matters pertaining to the class (optional, extra credit), and (6) form a committee for the appeal of all grades. All quizzes will be scored on a five-point scale; there will be no make-ups. All themes will be graded on a ten-point scale. Five points will be awarded for oral reports. The exams will be graded on a twenty point scale. The instructor will grade the quizzes, exams and themes of 1/4 of the students in the class on the same point scale and will award grades to the grading of peers, maximum 5 points. All quizzes and tests and grading exercises are closed book; students must answer and grade quizzes or exams on the basis of their knowledge of the subject -- **NOT** on the basis of their ability to find answers in a book or notes. Each member of the class will be required to fill out a weekly attitudinal survey; for each attitudinal survey the student will be awarded 2 points. No surveys will be accepted on dates other than the due date. The final grade in the course will be awarded on the basis of the grades on each quiz, each theme, the grading of the quizzes, the oral reports, weekly attitudinal surveys and the grades for the exams. In the event of absence, the first absence will be scored as 4.2; all absences thereafter will be scored as 1.1. Failure to submit an attitudinal survey on the day due will be scored as .1.

On the opening day of class the students were told that they were to learn two things during the five weeks that they were together: (1) what every educated person should know about the art and discipline of writing, and (2) how to write better. Actually, on the basis of the daily quizzes, tests and themes the students wrote on a daily basis since it is generally conceded that writing skill is improved by writing.

Thus, the course included the following features:

1. Student presentation of material from assigned readings in the text(s).
2. Student writing of quizzes on the material from the assigned reading or themes on assignments from the text on a daily basis.
3. Peer grading of the daily themes and quizzes with instructor spot-checks of from 25% to 30% of the themes and quizzes.
4. Student completion of a mid term and final exam.

During the first of these (1) the instructor sat at the back of the lecture room taking note of the student presentation which explained text material to peers. In preparation for writing two quiz questions on the blackboard requiring essay answers, the instructor noted the student-lecturer's emphasis on material from

the reading. Study questions for the mid-term and final were provided from the first day of class so that student-lecturers could use these in determining the focus for the individual class.

Grading of Quizzes and Tests

For the third of these, students and teacher alike awarded 5 points to papers which had no serious flaws. Errors reduced the total grade by .10 or more. Generally, the scores fell between 4 and 5. From an analysis of the grading, the students graded each other's themes and quizzes in a manner similar to that of the instructor since student grades and teacher grades did not differ significantly as tested by the Kendall W, a measure of concordance based on rank order. (See Table 1.)

Insert Table 1 about here.

The same kind of statement can be made about the student and teacher grading of the mid term and final exams. There the instructor and student grades did not differ in assigning ranks to students; in fact, their rank order correlated significantly using the Kendall W. (See Table 2.)

Insert Table 2 about here.

It should be evident, however, that students are more lenient than the instructor in awarding grades both on the mid term and final (student means 18.254 and 18.411 versus teacher means 17.739 and 17.606) and the quizzes and themes (student means of 6.338 and 7.243 versus 6.061 and 6.887 teacher means). (All of the differences in these means between students and teacher grading were significant using a t-test. See tables 3 and 4).

Insert Tables 3 and 4 about here.

In distributing papers for peer grading there are several sources of problems: (1) if the students are allowed to exchange papers a buddy system develops and grades are inflated unreasonably. The instructor must pick up the papers and distribute them in a random fashion for grading, stipulating that no student need grade the same indivdual's work more than once or twice in the semester. (2) Even with this precaution scams can develop. In one class of freshman English, the lone football player would pretend to be still writing when the instructor

picked up the papers. He would then exchange papers with an accomplice who would award him a high grade. Unfortunately for him, he chose the same accomplice too frequently and the scam became evident.

Not only did the instructor grade the paper of approximately 1/4 of the students on each quiz or theme but also graded the grading of the students on those papers which were instructor grade. The comments were recorded on 4 x 6 notepad paper so that the graders could view the comments of the instructor on the grading after each student-author had examined the grading and the comments. It should be apparent from the foregoing that record keeping became a major task in this type of teaching. To expedite this task, a computer program was written in Quick Basic that not only stored the grades but also adjusted the total score on the basis of each student's average and provided all the students with a daily average of their scores. Thus, the students' records might look like the following (Table 5):

Insert Table 5 about here.

The computer output for each quiz or theme and each student was as follows (Table 6):

Insert Table 6 about here.

To arrive at the adjusted total, the computer, in effect, takes every '0' in the record, read as 'no score' and writes in the student's average to compensate for the fact that not every student has the same number of grades. It is apparent from teaching a class of this nature that students like to have a daily progress report.

Curriculum

The curriculum for the class centered on the two texts required in the freshman English program at Arizona State University: (1) D'Angelo, Frank J. Process and Thought in Composition (Cambridge, Mass.: Winthrop Publishers, 1980) and (2) Schwegler, Robert. Patterns in Action (Glenview, Ill.: Scott Foresman & Co., 1988). The strategy for presenting the material to be covered followed the following pattern, (1) students volunteered to explain the material in the text, (2) each student presenter explained the material in the text during the class hour, (3) the class then discussed the matter in the text, (4) the instructor wrote two or three questions on the blackboard centering on matter from either of the texts as highlighted by

the student presenter, (5) students then wrote essays answering the questions, and (6) the last ten minutes of the class were spent with the students grading the papers of their peers. Since the conduct of the class, one or two changes in this procedure have been contemplated. The first of these, requiring the student presenter to explain an outline of the presentation before class, has been prompted by the fact that some students were obviously unprepared for the task that they had undertaken. The second of these, requiring the student-presenter to have a GPA of 3 points or better, has been contemplated because some weak students have brought the class to a twenty minute halt by their inept presentations.

Student Attitudes

From one point of view, at least, the writing class, organized on collaborative learning principles, proved to be very satisfactory. This satisfaction was measured on an attitudinal based on similar surveys using a conventional scale patterned on the Osgood, Suci and Tannebaum semantic differential as modified by Lodahl and Kejner to elicit student attitude towards the both the freshmen composition and grammar class. The response categories were scored from '1' (strongly agree) to '5' (strongly disagree) as in the study by Knoop (1980) and subjected to various kinds of statistical analysis such as reliability tests, correlations and other measures of similarity (or difference). It

is interesting to note that the mean score of the first year students usually hovers around '1' or '2' with '1' as most positive and '5' as most negative whereas the mean score of the grammar students is about '3' or '4' on the same scale.

Thus these students indicated their satisfaction on these weekly attitudinal surveys which showed an interesting trend. (See Appendix I for copy of the survey and for the raw scores.) From the first day and throughout the class, students showed their satisfaction on the attitudinal survey on which they marked an average response of 1.97 with one as extremely positive, three as neutral and five as extremely negative. Their attitudes turned even more positive in every week except the third week, the week of the mid term exam, when it dippped to 2.011 as evidenced by the mean scores on the survey. During the other weeks it hovered around 1.9. (See Figure 1.) Besides this, it is interesting to note that in a factor analysis, most of the variance was accounted for by a factor that centered around item 'B' and could be labelled 'general classroom management'. Another factor which was very positively viewed centered on 'C', a factor which deals with activities that require the most student involvement (grading quizzes). The least liked features of the class deal with the instructor's intervention in the process items (A and G) although both of these items show a fairly large amount of variation. (See Figure 2.) Item H, another item dealing with the instructor's

participation seems to be in the middle for most of the session but ends with the most positive score of the lot -- students liked the way the class was being run.

Insert Figures 1 and 2 about here.

It is also interesting to note that the freshmen in English 101 (E101 - Freshman Composition) were much more positive in their outlook on the class than junior level students in a modern grammar class (E314 - Modern Grammar) and that the differences between the way the freshmen chiecked the survey and the grammar students were statistically significant beyond the .05 level on a Friedman Analysis of variance. (See Table 9).

Insert Table 9 about here.

Mastery of Material

Not only did the students in this section cover the subject from a broadening point of view through the use of the assigned texts but they also covered it well. If an arbitrary point such

as a score of 18 on the midterm and final of the student grades is set for mastery of 80% of the material in the class then 19 students or 67% of the class attained this level of mastery. Similarly, since the instructor's grading scale was somewhat lower than the students' (See Table 2: Student Mean = 18.254 (Mid Term) 18.411 (Final); Teacher mean = 17.739 (Mid Term) 17.607 (Final)), the score should be set at 17 on the teacher's grades yielding 22 students or 78% of the class attained the 80% mastery level for the content material in the class. Similarly, if the 80% mastery level is set at 4.8 out of 5 points on the daily quizzes as they were graded by students, then 69% of the students reached this level on a daily basis; if the 80% criterion level is set at 4.7 for the teacher graded daily quizzes on the basis of the fact that the teacher mean grade is lower than the student mean grade then 58% of the students reached this level of accomplishment on a daily basis. Thus, from the instructor's point of view, no students failed the midterm; only one student came close to failing the final with a score of 13. No students failed the class; twenty-six out of 30 finished the class.

Furthermore, although sample grading of all student work was not attempted so that some measure could be made of improvement over the five week period of the course, informal sampling was done and the beginning work and the ending work of a single student was preserved. This work indicates that although this par-

ticular student continued to have problems with low level errors such as spelling; his concepts of organization and paragraph development were strengthened so that he evidenced real improvement in this area. The same could be said of a number of other students. It would appear that stylistic changes in writing were and continue to be resistant to change but general organization and coherence improved in the writing of a number of students.

Conclusion

Perhaps the most encouraging aspect of this particular attempt to use the collaborative learning model for the 'teaching' of freshman English is the positive perception of students on the whole of the conduct of the class as measured on attitudinal surveys. These positive perceptions that students have of their involvement in the educational process is the most satisfying finding in this study. Perhaps an even greater positive aspect of the cooperative learning model used here is the discipline that it introduced into the educational process resulting in a more adequate mastery of the subject matter and skill in writing. Future classes and attempts to sample other aspects of the educational process involved in collaborative learning will, no doubt, throw more light on the nature of student-teacher interaction and the reasons for the findings in this study.

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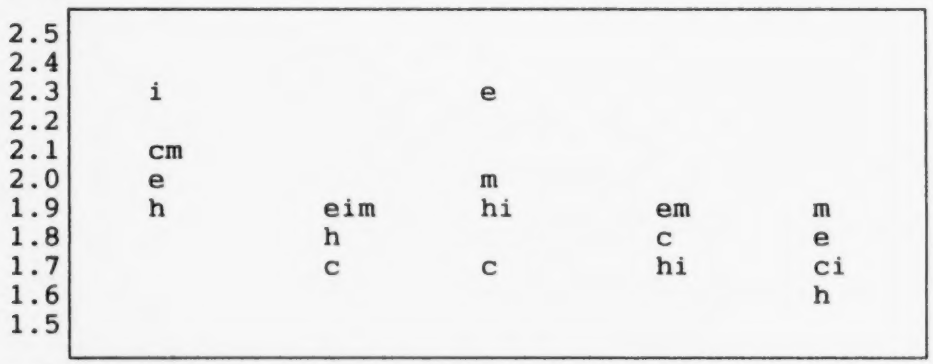
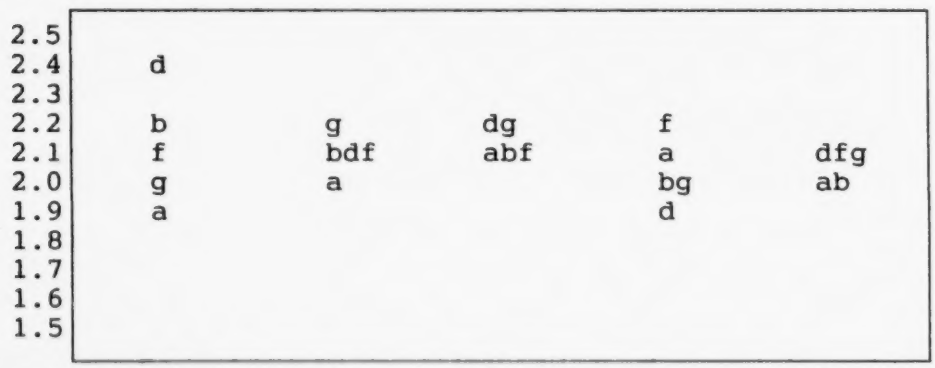
Figure 1: Attitudinal Survey: Items E through I and M



c= Item C, e=Item E, h=Item H, i=Item I
m = mean score for all items

Figure 2: Attitudinal Survey: Items A through E



a = Item A, b=Item B, d=Item D, f=Item F, g=Item G

Table 1: Correlation of Student and Teacher Grades on Quizzes and Themes -- Kendall W - Coefficient of Concordance

	N	Mean	Std Dev	Minimum	Maximum
SGRAD	79	6.338	2.204	3	10
TGRAD	79	6.061	1.964	3	10

Mean Rank	Variable
1.65	SGRAD -- Student Grades on QUIZZES and THEMES to MID TERM E101
1.35	TGRAD -- Teacher Grades on QUIZZES and THEMES to MID TERM E101

Cases	W	Chi-Square	D.F.	Significance
79	.1919	15.1579	1	.0001***

	N	Mean	Std Dev	Minimum	Maximum
SGRAD	60	7.243	2.573	3	10
TGRAD	60	6.887	2.266	3	10

Mean Rank	Variable	
1.69	SGRAD	Student Grades on QUIZZES and THEMES from MID TERM E101
1.31	TGRAD	Teacher Grades on QUIZZES and THEMES from MID TERM E101

Cases	W	Chi-Square	D.F.	Significance
60	.2844	17.0646	1	.0000***

One-tailed Significance * - .05; ** - .01; *** - .001

Table 2: Correlation of Student and Teacher Grades on Exams Using the Kendal W - Coefficient of Concordance

SG - Student Grades on MID TERM E101 1989
TG - Teacher Grades on MID TERM E101 1989

	N	Mean	Std Dev	Minimum	Maximum
SG	28	18.254	1.639	15	20
TG	28	17.739	1.544	13	19

Mean Rank	Variable	
1.73	SG	Student Grades on MID TERM E101 1989
1.27	TG	Teacher Grades on MID TERM E101 1989

Cases	W	Chi-Square	D.F.	Significance
28	.2874	8.0476	1	.0046**

	N	Mean	Std Dev	Minimum	Maximum
SGRAD	27	18.411	1.435	16	20
TGRAD	27	17.607	1.591	15	20

Mean Rank	Variable	
1.72	SG	Student Grades on FINAL E101 1989
1.28	TG	Teacher Grades on FINAL E101 1989

Cases	W	Chi-Square	D.F.	Significance
27	.4444	12.0000	1	.0005***

One-tailed Significance * - .05; ** - .01; *** - .001

Table 3: t-Test on Means of Teacher - Student Grades on Quizzes and Themes

Paired samples t-test:
SGRAD Student Grades on QUIZZES to MID TERM E101
TGRAD Teacher Grades on QUIZZES to MID TERM E101

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SGRAD	79	6.3380	2.204	.248
TGRAD	79	6.0608	1.964	.221

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr.	2-Tail Prob.
.2772	.611	.069	.964	.000 ***

t Value	Degrees of Freedom	2-Tail Prob.
4.03	78	.000 ***

Paired samples t-test:
SGRAD Student Grades on QUIZZES FROM MID TERM E101.
TGRAD Teacher Grades on QUIZZES FROM MID TERM E101.

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SGRAD	60	7.2433	2.573	.332
TGRAD	60	6.8867	2.266	.293

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr.	2-Tail Prob.
.3567	.842	.109	.947	.000

t Value	Degrees of Freedom	2-Tail Prob.
3.28	59	.002

Two-tailed Significance * - .05; ** - .01; *** - .001

Table 4: t-Test of Means of Teacher - Student Grades on Mid-term and Final Exams

Paired samples t-test:
SGRAD Student Grades on MID TERM E101 1989
TGRAD Teacher Grades on MID TERM E101 1989

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SGRAD	28	18.2536	1.639	.310
TGRAD	28	17.7393	1.544	.292

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr.	2-Tail Prob.
.5143	.988	.187	.809	.000

t Value	Degrees of Freedom	2-Tail Prob.
2.76	27	.010

Paired samples t-test:
SGRAD Student Grades on FINAL E101 1989
TGRAD Teacher Grades on FINAL E101 1989

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SGRAD	27	18.4111	1.435	.276
TGRAD	27	17.6074	1.591	.306

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr.	2-Tail Prob.
.8037	1.280	.246	.647	.000

t Value	Degrees of Freedom	2-Tail Prob.
3.26	26	.003

Two-tailed Significance * - .05; ** - .01; *** - .001

Table 5: Student scores on daily quizzes

Name	Student Grade	Grading	Teacher Grade	Credit
January 25, 1989 Activity #1				
Baker, James	4	0	0	2
Carleton, Ray	4.85	5	0	2
Daniels, Susan	5	5	0	2
Edgewater, Teri	4.2	4.6	4.4	7
Foxglove, Luke	5	0	0	0
Geldwesser, Barry	4.5	0	0	2

Table 6: Daily quiz report for students

GELDWESSER

SG = Student Grade, G = Grading TG = Teacher Grade, X= Other

	SG	GR	TG	X	Total	Adj. Total
10 - 03-03-1989	5	0	3.5	7	114.9	218

Your Adjustment is based on 12 scores out of 36 scores at 3.

Table 7: Means and Standard Deviations of Averge Scores on Attitudinal Survey for Five Weeks

Variable	Cases	Mean	Std Dev
ITEMA	5	2.0200	.0837
ITEMB	5	2.0800	.0837
ITEMC	5	1.8200	.2168
ITEMD	5	2.1400	.1817
ITEME	5	1.9800	.1924
ITEMF	5	2.1200	.0447
ITEMG	5	2.1000	.1000
ITEMH	5	1.7800	.1304
ITEMI	5	1.9000	.2449

Table 7: Correlation of Average Scores on Items A through I I of Attitudinal Survey over a Five Week Period

Correlations:

	ITEMA	ITEMB	ITEMC	ITEMD	ITEME	ITEMF
ITEMA	1.0000	-.6429	-.7167	-.7237	.3418	.5345
ITEMB	-.6429	1.0000	.7167	.8882*	.4350	-.5345
ITEMC	-.7167	.7167	1.0000	.6729	.0120	-.0516
ITEMD	-.7237	.8882*	.6729	1.0000	.3863	-.7385
ITEME	.3418	.4350	.0120	.3863	1.0000	-.2325
ITEMF	.5345	-.5345	-.0516	-.7385	-.2325	1.0000
ITEMG	.2988	-.0000	-.6919	.0000	.3899	-.5590
ITEMH	-.1833	.8709*	.4599	.6755	.7775	-.3430
ITEMI	-.7319	.9759*	.8474*	.8989*	.3184	-.4564

	ITEMG	ITEMH	ITEMI
ITEMA	.2988	-.1833	-.7319
ITEMB	-.0000	.8709*	.9759**
ITEMC	-.6919	.4599	.8474*
ITEMD	.0000	.6755	.8989*
ITEME	.3899	.7775	.3184
ITEMF	-.5590	-.3430	-.4564
ITEMG	1.0000	.1917	-.2041
ITEMH	.1917	1.0000	.7828
ITEMI	-.2041	.7828	1.0000

Minimum pairwise N of cases: 5

2-tailed Signif:

* - .05 ** - .01

*** - .001

Table 8: Factor Analysis of Items on Attitudinal Survey

Analysis Number 1 Listwise deletion of cases with missing values
Extraction 1 for Analysis 1, Principal-Components Analysis (PC)

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
		*				
ITEMB	.99514	*	1	5.09124	56.6	56.6
ITEMC	.96851	*	2	2.30261	25.6	82.2
ITEMF	.99707	*	3	1.35855	15.1	97.2
ITEMD	.94732	*				
ITEME	.94684	*				
ITEMG	.97574	*				
ITEMH	.96350	*				
ITEMI	.96651	*				
ITEMA	.99178	*				

PC Extracted 3 factors.

Table 9: Difference between E101 and E314 Students on Attitudinal Surveys

	N	Mean	Std Dev	Minimum	Maximum	Signif. Friedman ANOVA
ITEMAG	13	2.885	.416	2	4	
ITEMAF	5	2.020	.084	2	2	.025
ITEMBG	13	3.085	.251	3	4	
ITEMBF	5	2.080	.084	2	2	.025
ITEMCG	13	2.500	.277	2	3	
ITEMCF	5	1.820	.217	2	2	.025
ITEMDG	13	3.200	.277	3	4	
ITEMDF	5	2.020	.084	2	2	.025
ITEMEG	13	2.746	.285	2	3	
ITEMEF	5	2.080	.084	2	2	.025
ITEMFG	13	2.823	.370	2	3	
ITEMFF	5	1.820	.217	2	2	.025
ITEMGG	13	3.023	.317	2	4	
ITEMGF	5	2.100	.100	2	2	.025
ITEMHG	13	3.308	.325	3	4	
ITEMHF	5	1.780	.130	2	2	.025
ITEMIG	13	2.577	.370	2	3	
ITEMIF	5	1.900	.245	2	2	.025

In each of the pairs, the grammar students are first (e. g. ITEMAG and the freshmen students are second (e.g. ITEMAF)

Appendix I: Attitudinal Survey

JWNey Attitudinal Survey: English 101 Assignment date: 6/7/89

Respond to each of the statements by checking the item that you feel is right and by circling the number in front of it.

A. The subject matter of this course is presented in an interesting and challenging manner.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

B. The conduct of the class is helpful; it helps me in the mastery of the subject matter and of the writing process.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

C. Grading the quizzes and essays gives me an appreciation of the work that other students are doing.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

D. My level of frustration is low; I find the conduct of the class satisfying and of interest in itself.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

E. It is a good experience for me to grade the quizzes and essays of other students; it helps me master the subject matter.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

F. It helps me a lot to have another student going over the material in the assigned reading.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

G. The instructor's participation in the class keeps the class running smoothly and insures maximum student involvement.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

H. I like the way that the instructor is running the ENG 101 class this summer.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

I. Studying for the exams and the daily quizzes helps me to write better answers to questions on the writing process.

__1. I strongly agree. __2. I agree. __3. I have no opinion on the matter. __4. I disagree. __5. I strongly disagree.

Item	Raw Scores on Attitudinal Study									
	Week									
	1		2		3		4		5	
A	56	1.93	51	2	54	2.1	53	2.1	52	2
B	63	2.17	53	2.1	52	2.1	49	2	53	2
C	63	2.17	43	1.7	45	1.7	44	1.8	43	1.7
D	70	2.41	52	2.1	59	2.2	47	1.9	54	2.1
E	59	2.03	47	1.9	63	2.3	47	1.9	46	1.8
F	62	2.13	52	2.1	57	2.1	55	2.2	55	2.1
G	58	2.00	54	2.2	59	2.2	50	2	55	2.1
H	56	1.93	42	1.8	50	1.9	43	1.7	41	1.6
I	67	2.31	48	1.9	50	1.9	43	1.7	45	1.7
M	62 n=29	2.12	49 n=25	1.96	54 n=27	2.0	48 n=26	1.9	49 n=26	1.89

M = Mean score; First column = raw total;
Second column = mean score for the item.

Week 1 = June 7; Week 2 = June 14; Week 3 = June 20;
Week 4 = June 29; Week 5 = July 5